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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,759	08/24/2001	Klas Carlberg	2380-188	8910

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EXAMINER	
PARK, JUNG H	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/935,759	CARLBERG ET AL.	
	Examiner	Art Unit	
	Jung Park	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-9,11-20,22-27,36-40,42-44,46-55,57,62,&73-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-9,11-20,22-27,36-40,42-44,46-55,57,62,73-75 and 77-79* is/are rejected.

7)☒ Claim(s) *76 and 80* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Remark

1. This communication is considered fully responsive to the Amendment filed on 02/02/2007.

   a. The objection to the claim 60 is withdrawn since it is being amended accordingly.

   b. The rejection to the claims 8, 9, 43, and 44 under USC 112, 2nd is withdrawn since it is being amended accordingly.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 73, 77, 74, 78, 1-5, 7-9, 11, 12, 14-16, 18-20, 22-27, 36-40, 42-44, 46, 47, 49-51, 53-55, and 57-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Caves et al. (U.S. 6,891,833, "Caves").

Regarding claims 73 and 77, Caves discloses a node [and a method] of a data communication network comprising:

- a switch (*26 fig.7*);

- plural user plane resources (*a plurality of AAL2 VCCs to transfer packet switched data fig.7*) connected to the switch (*as shown in fig.7*), the plural user plane resources comprising one or more of link resources (*AAL2 VCCs fig.7*) and end system resources (*col.8, ln.43-47 where ...certain resource in the end system*) involved in a bearer service

connection (*fig.1 where a bearer service allowing transmission of information signals between network interfaces 11, 12 & 13 fig.1*)

- a cluster of plural processors (*37 & 78 fig.7 where processors (not shown) for AAL2 signaling servers; col.3, ln.35-37 where it is inherent to have a processor to execute AAL2 signaling protocol implemented by software and co-ordination & control 78 as a central processor*);

- connection handling functionality (*AAL2 signaling controlled by 78 fig.7; col.9, ln.6-16*) distributed over the cluster of the plural processors (*37 fig.7*), the connection handling functionality being configured to facilitate execution of at least some non-signaling software objects (*objections for routing requirements, see col.5, ln.15-18; an objection for resource pool, see col.8, ln.15-24*) for setup or release of a first connection on a different processor of the cluster (*col.3, ln.35-37 executing AAL2 signaling protocol software in one of AAL2 signaling server (processor) for AAL2 VCC connection*) than at least some non-signaling software objects (*objections for routing requirements, see col.5, ln.15-18; an objection for resource pool, see col.8, ln.15-24*) executed for setup or release of a second connection (*executing AAL2 signaling protocol software in another AAL2 signaling server (processor) for AAL2 VCC connection*).

Regarding claims 74 and 78, Caves discloses, "wherein signaling software objects for the first connection and the second connection are handled by a same processor (a processor, not shown, in 38 fig.3 for controlling AAL2 signaling servers; col.6, ln.13-23)."

Regarding claims 1 and 36, Caves further discloses, "infrastructure data (col.9, ln.15-20 routing data) for the connection handling functionality is distributed among the plural processors of the processor cluster (col.9, ln.15-20); and connection data (col.9, ln.9-12 AAL2 connection data) is created on a selected processor of the processor cluster when an on demand connection is established at the selected processor (col.9, ln.9-12).

Regarding claims 2 and 37, Caves further discloses, the processor cluster handles AAL2 connections (col.9, ln.9-12).

Regarding claims 3 and 38, Caves further discloses, the processor cluster includes a predistributor (78 fig.7) which routes incoming signaling messages to an appropriate processor of the processor cluster (col.9, ln.15-20).

Regarding claims 4 and 39, Caves further discloses, the predistributor resides on one of the plural processors of the cluster which handles connections (78 fig.7).

Regarding claims 5 and 40, Caves further discloses, a processor of the node which does not handle connections serves as the predistributor (78 fig.7).

Regarding claims 7 and 42, Caves further discloses, an administrator processor (processor in 78 fig.7) which distributes the infrastructure data among the plural processors of the processor cluster (rejected in claim 1).

Regarding claims 8, 9, 43, and 44, Caves further discloses, resource handling data is dynamically partitioned among the plural processors of the processor cluster (37 fig.7; col.9, ln.6-16).

Regarding claims 11 and 46, Caves further discloses, when a connection is to be set up to another node, an instance of a connection object is established in a selected one of the processors of the cluster, and wherein the connection object both reserves and activates resources of the node (32 fig.7; col.9, ln.1-20 where function of AAL2 connections).

Regarding claims 12 and 47, Caves further discloses, the connection object reserves a resource of the node by communicating with an instance of a resource control object executed by a processor of the cluster (col.9, ln.1-20 where it is inherent to reserve resource for connections).

Regarding claims 14 and 49, Caves further discloses, the instance of the resource control object (col.9, ln.1-20 where object for selection of one of AAL2 signaling severs for VCCs) is executed by a different processor than the processor which executes the connection object (note: connection object in AAL2 server).

Regarding claims 15 and 50, Caves further discloses, the connection object determines which instance of a link resource control object with which to communicate by communicating with a routing object executed by a processor of the cluster (col.9, ln.15-20).

Regarding claims 16 and 51, Caves further discloses, the connection object activates a resource of the node by communicating with an instance of a resource user plane object executed by a processor of the cluster (col.9, ln.1-20 where resource reservation for VCCs connection).

Regarding claims 18 and 53, Caves further discloses, the instance of the resource user plane object is executed by a different processor than the processor which executes the connection object (col.9, ln.1-20 where AAL2 links allocation for VCCs connection).

Regarding claims 19 and 54, Caves further discloses, setting up the connection to the another node, the connection object uses a signaling object to send a connection establish signaling message to the another node (col.9, ln.1-20 where connection establishment with 32 fig.7).

Regarding claims 20 and 55, Caves further discloses, the connection object communicates with a signaling object executed by a processor of the cluster in order to send the connection establishment signaling message to the another node (col.9, ln.1-20 where connection establishment with 32 fig.7).

Regarding claims 22 and 57, Caves further discloses, for a path incoming to the node the processor cluster has an instance of a resource control path object executed by one of the processors of the cluster, and wherein the instance of the resource control

path object handles signaling for the path or for a unique connection identifier within the path, and wherein the predistributor distributes certain signaling messages or indications concerning the path to the instance of the resource control path object (col.9, ln.1-20; col.9, ln.57 - col.10, ln.9).

Regarding claims 23 and 58, Caves further discloses, the path is an AAL2 path handling Q.2630.1 signaling (col.9, ln.1-20 where AAL2 signaling is equivalent to Q2630.1).

Regarding claims 24 and 59, Caves further discloses, an instance of a resource control signaling relation object representing plural paths having a signaling relation, and wherein the predistributor distributes certain signaling messages or indications concerning the signaling relation path to the instance of the resource control signaling relation object (col.9, ln.1-20 where VCCs).

Regarding claims 25-27 and 60-62, Caves further discloses, the predistributor has four distribution tables, and wherein each of the following are utilized by at least one of the four distribution tables for routing the incoming signaling message: destination signaling association identifier (DSAI); served user generated reference (SUGR); signaling link identity; path identity (col.9, ln.57 - col.10, ln.9 where table for one of DSAI, SUGR, and identifiers).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 13, 17, 48, 52, 75 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caves.

Regarding claims 13 and 48, Caves does not explicitly teach, the instance of the resource control object is executed by a same processor which executes the connection object. However, at the time of the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to include the central control process to one of the signaling servers as a central administrator server to simplify the components of AAL2 node.

Regarding claims 17 and 52, Caves further discloses, the instance of a resource user plane object is executed by a same processor which executes the connection object. This claim is rejected for the same reasons and motivation set forth in the rejection of claim 13.

Regarding claims 75 and 79, Caves does not explicitly disclose, "wherein at least some of the non-signaling objects for the first connection are handled on a different processor than other non-signaling objects for the first connection." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a different processor for each of the objections for handling the routing function

(col.5, ln.15-19) and resource pool function (col.8, ln.15-24) in order to prevent overloading imposed to a processor by using multiple processors according to its functionalities.

Allowable Subject Matter

6. Claims 76 and 80 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

7. Applicant's arguments with respect to claims 73 and 77 have been considered but are not persuasive.

At page 13, applicant argues that Caves does not disclose, "non-signaling software objects executed on distributed processors."

In reply, Caves discloses the non-signaling software objections for the route function (col.5, ln.15-19) and resource pool function (col.8, ln.15-24). Caves does not explicitly disclose, "the objects executed on distributed processors." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a different processor for each of the objections for handling the routing function and resource pool function (col.5, ln.15-19 and col.8, ln.15-24) in order to prevent overloading imposed to a processor by using multiple processors according to its functionalities.

Applicant also argues that Caves does not disclose "setup or release of connections in terms of node resources (other than signaling servers)." In reply, Caves

discloses the function of resource pool for AAL2 connections. That is, it is required to have an objection for the resource pool function as a non-signaling software objection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jung Park
Patent Examiner

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